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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/964,177 | 09/25/2001 | Yatao Hu | PQC-302US | 9599 |
| 23122 | 7590 | 11/10/2003 | EXAMINER | |
| RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980 | | | WRIGHT, WILLIAM G | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1754 | 6 |
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,177

Applicant(s)

HU, YATAO

Examiner

William G. Wright SR.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Applicant's arguments against all of the outstanding rejections have been found persuasive. Accordingly, all previous rejections of record are withdrawn.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sims et al. '248[^] in view of Schlaefer'888.
as applied to claim 1 below and further

Sims teaches a silica containing catalyst for unsaturated carboxylic acid production. The teaching of chemically combined metal, silica and alumina is found at column 3 line 9 et seq. The instant claim 9 teaches the second metal to be aluminum. Example 2 of columns 3 and 4 teaches the application of alkali metal hydroxide in the instant type of catalyst.

Sims fails to teach the pH limitation of the instant claimed invention.

Schlaefer teaches a silica catalyst with basic sites formed on the catalyst. These teachings are found at columns 3 and 4 of

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the reference, where cesium hydroxide is found at column 4 line 44. The teachings at column 4 line 46 et seq. are especially noted. The teaching of adding a base directly to a silica is found at column 4 line 62 et seq. The teaching of a pH of 3.0 or higher is found at column 5 line 5. The teaching of zirconium and titanium is found at column 5 line 18 and at claim 12 where zirconium is found. The "sufficiently basic" teaching found in Schlaefer at column 5 line 7 shows clearly that in the view of the reference and thus prior art, any pH higher than pH 3.0 will work to provide the basic character required for the catalyst production. Example 1 of columns 5 and 6 is noted for the teaching of the use of potassium hydroxide.

Schlaefer teaches a pH of 3.0 or higher at column 5 line 5, saying that a pH of 3.0 is sufficiently basic to accomplish the desired result of the reference. There is overlap of pH found at the cited teachings of the reference and the instant claim. In re Malagari 182 USPQ 549 is cited to teach the obvious nature of overlapping ranges. A practitioner would be motivated to use a basic pH as is stated in Schlaefer column 5 line 8. It would be considered an obvious expedient left to a practitioner to adjust or use a pH that produced a catalyst with the desired properties. Thus the instant claimed invention using pH as a claimed feature is shown to be obvious, from the teachings applied.

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Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Sims et al. '248 or Schlaefer '888.

Sims teaches silica treated by a water solution of alkali to provide a catalyst for the instant claimed utility. These teachings are found at Examples 1 and 2 of columns 3 and 4. Schlaefer teaches the forming of a silica catalyst with alkali in a water solution at Example 1 of columns 5 and 6.

The specific forming of a silica and the washing of that silica component is not found in the applied references.

It would be obvious to form and wash any silica that may be used as a component in the instant claimed invention. Thus the specific statement of such is not needed to disclose the claimed invention to be obvious. The contacting of the silica component with an alkaline solution to produce the catalyst is well represented by the pointed to areas of the references each showing the claimed invention of a silica treated by an alkaline solution to be obvious.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William G. Wright, Sr. whose telephone number is (703) 305-7792. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 5:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (703) 308-3837. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9306 for the regular communications and (703) 872-9311 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1495.



W. G. Wright, Sr.:cdc

November 3, 2003



**STEVEN BOS
PRIMARY EXAMINER
GROUP 1100**